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SUBJECT: ENVIRONMENTAL IMPACTS OF VIETNAM'S CRAFT VILLAGES

REF: 08 HANOI 981

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11. (U) Summary: Vietnamese craft villages play an important economic role, particularly in the country's north and employ 14 million people. However, older, less-efficient technologies with limited pollution control equipment in these villages discharge massive amounts of waste directly into the surrounding areas, damaging the environment and the health of local residents. Limited attempts to address environmental issues have not proven successful as existing technology does not seem to fit the scale of craft village production and emissions. End Summary.

What Are Craft Villages?

- 12. (U) Vietnamese craft villages comprise more than local gatherings of artisans manufacturing traditional products. Instead, the term refers to a much broader grouping of small and medium sized industries, centered in a village specializing in one particular product or service. Per the Ministry of Labor, at least 30-35 percent of all households in village must do business in the craft and earnings from those households must be 50 percent of total earnings of village. The scope of craft villages is quite varied, and includes villages specializing in handicrafts (goods for daily use, such as leather), arts (furniture, lacquer, jewelry, embroidery), service and trade (plastic and paper recycling), industrial products (steel, paper), food processing (liquor, animal slaughtering, essential oils), and material supply and processing (example).
- 13. (U) Craft villages play a surprisingly important role in Vietnam's economy, particularly in the north, the location of most craft villages (Note: southern Vietnam relies more heavily upon industrial zones and export processing zones, reftel). 14 million people, or over 30 percent of Vietnam's labor force, find employment in 1,451 craft villages, covering 46 different crafts. The Center for Science Technology and the Environment (COSTE), the quasi-governmental organization created in 2004 to promote productivity and environmental management at craft villages, estimates that craft villages make up 25 percent of GDP and produced exports valued at over USD 500 million annually. A craft village may include hundreds of small firms and employee thousands of workers. In many localities, craft villages bring about half of the localities' total revenues and create jobs for a large number of young people in rural areas. For example, environmental officials in northern Bac Ninh province stated that the province's 62 craft

villages comprised 70 to 80 percent of provincial economic production, with each craft village employing 3,000 to 7,000 laborers. Bac Ninh's craft villages largely focused on wood furniture, construction materials, steel, paper and foods, primarily for domestic consumption.

Environmental Impacts

14. (SBU) Due to limited capital and exposure to international practices, many craft villages adopt older technologies or modify equipment to fit the smaller scale of production or less-sophisticated production techniques. Reliant on these inefficient technologies and unable to afford pollution control equipment, many craft villages release substantial pollutants directly into the environment through air and water emissions and the production of toxic, solid wastes. According to COSTE, 100 percent of craft villages do not meet environmental standards. Bac Ninh environmental officials frankly admitted that craft villages cause most of the province's environmental problems, which continue to worsen as craft villages grow. Higher levels of output and income have, in turn, resulted in increased waste generation, both domestic and industrial.

Just How Bad Is It?

15. (U) Where homes and workshops are intermingled, open drains that carried storm water and domestic wastewater into adjacent rice fields may now carry grease and oil from equipment, acids and heavy metals from plating liquors, organic wastes from food processing, as well as pig manure and household wastewater. For example, wastewater from noodle and vermicelli production contains bio-organisms significantly above permissible limits; leather processing has led

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to contamination in wastewater and in groundwater spreading pollution to neighboring villages; recycling plastics and metals causes air, solid waste and wastewater pollution -- all significantly above government standards; battery recycling leads to exposure to hazardous chemicals; textiles, dyeing wastewater contains pollutants (BOD, COD) many times higher than government standards resulting in fish and shrimp kills in common water sources, and solid waste and dust from construction materials and tile, often produced in densely populated areas with no treatment for air emissions, kill nearby plant life kills nearby plant life. In Bac Ninh, paper craft villages discharge 4,500 to 6,000 cubic meters of waste water per day into the public waste water system, generate 50 tons of solid waste (plastic, coal waste) daily, and have air emission levels for some pollutants up to ten times GVN standards. 15,000 cubic meter of wastewater from Bac Ninh's 100 small steel smelters is discharged without any treatment. Organic solvents and paint residues from wood furniture villages similarly are discharged directly into the environment.

Visits to Craft Villages Highlight Pollution Problems

16. (U) During visits to an animal slaughtering craft village and a paper recycling village, ESTH Officer witnessed few environmental protections. At the animal slaughtering village, all local and village officials and craft village residents readily admitted that the craft village has no environmental protection or worker safety measures at all. Workers piled fresh animal skins directly on the ground in household compounds and dumped bones from freshly slaughtered animals into a pond which served as the town's emergency reservoir in case of draught. A mechanical bone grinder processed up to four tons of bones per day without any protection for workers who stood for hours in clouds of bone dust. Blood and viscera from slaughtering areas ran through street side gutters into a collecting pond adjacent to the local elementary school in which local women harvested water plants for consumption. Though no studies have been performed on the health impacts of this pollution, residents report lowered agricultural yields due to salinization from runoff from salting and drying of hides and note discolored drinking water taken from local wells.

17. (U) The Viet Nhat Paper Joint Stock Cooperative, located in Bac Giang province, together with several smaller paper recycling factories, produces over 10,000 tons of photocopy and notebook paper each year, largely made from paper pulp and waste paper imported from the United States. Though employees receive basic safety and environmental training, the facility has no central wastewater treatment system and the cooperative's manager acknowledged that several rice fields surrounding the village can no longer be used due to water pollution. Despite attempts to filter and recycle wastewater prior to discharging, ESTH Officer witnessed discolored water piped out of the facility into common drainage ditches. Cooperative employees noted that the facility uses several chemicals in the production process and discharges 40 cubic meters of wastewater per day.

Health Impacts

18. (U) The health impacts of craft villages on local residents are long-standing. Residences and production sites in craft villages are intermixed, leading to close and constant exposures to toxic pollutants resulting in serious health impacts. Due to the sensitivity of the issue and limited resources, the central government and provincial authorities release few statistics on the health impacts of craft village production. However, as early as 1996, a health survey of 233 residents of the Bat Trang ceramics village (total population of approximately 6,000) found 76 persons with respiratory ailments and 23 with tuberculosis. In 1995, 23 persons from the village died of lung cancer. Bat Trang residents comprised 70 percent of the lung cancer patients in Hanoi hospitals in 1996. In 2005, at the bronze casting and lead smelting craft village of Dong Mai, an international NGO reported that smelting left 500 people with chronic illnesses and 25 children with brain damage. Many households built furnaces adjacent to their houses. According to local health officers, 80 percent of the village's population is subject to such diseases as pneumonia, encephalitis, and cancers.

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Attempts to Address Environmental Concerns

19. (U) With support from the Japan International Cooperation Agency (JICA), COSTE has initiated several projects designed to improve environmental practices at craft villages, with a particular focus on improving production technologies and practices. COSTE has attempted to create a sustainable development strategy through raising environmental awareness in craft villages, looking for suitable technologies to treat wastewater and air emissions from craft village and developing management software for environmental protection at craft villages and cooperatives, working with cooperatives in a few provinces to develop cleaner technologies, and developing food safety programs. Similarly, the Bac Ninh DONRE is attempting to address craft village pollution concerns through increasing public awareness and attempts to remove industries from the villages and into areas or "focal" industrial parks with better infrastructure and environmental controls, including pre-construction environmental impact assessments. The villages remain, but solely for residence, not for production or industry. The GVN has also created the Vietnam Environment Protection Fund with an annual budget of approximately USD 12 million to provide preferential loans to help industrial zones and craft villages process wastes. Supported by funds from the collection of various environmental fees and fines and from the exchange of quotas for carbon dioxide emissions, VEPF has already assisted a number of craft villages to build waste processing facilities.

Environmental Solutions Face Many Hurdles

110. (U) Attempts to address environmental impacts at craft villages face several significant obstacles. At this time, appropriately

scaled pollution abatement technology for most small and medium-sized facilities in Vietnam does not exist. Nearly all environmental interventions have to be re-engineered for small, family-run workshops that cannot afford end-of-pipe treatment methods commonly used in larger production facilities. According to Michael DiGregorio of the Ford Foundation, who has studied craft villages for over a decade, many for-profit firms find it difficult to produce this type of equipment and protect their intellectual property. Such solutions include better housekeeping, higher smokestacks, improved pumps, better regulation of heat, improved sediment and oil traps, and chemical neutralization of acids and toxic substances. GVN officials stated that many production units are incapable of any expenditure on waste processing, estimated at 25 percent of the total production cost. Many of Vietnam's environmental, health, safety and labor laws do not reflect the particular conditions of family enterprises. Craft villages compete in the market through greater flexibility associated with lower fixed capital costs, lower labor costs, and lower administrative costs. Imposition of regulations appropriate to larger firms with different cost structures will likely only raise the level of underground payments owners are forced to make. Finally, most major polluters are the residents themselves. Stricter enforcement would endanger their livelihoods. No workshop owner is willing to introduce environmental and safety features that raise costs and reduce competition with others who produce similar products.

111. (U) GVN efforts to address environmental issues have not proven effective. COSTE acknowledges that it does not have adequate information to form base lines from which to track environmental progress and continues to seek support for a nationwide survey of environmental conditions in and impacts from craft villages. On several occasions, the GVN moved a number of household micro-enterprises into light industrial areas to remove pollution from residential neighborhoods. However, subsequently, other micro-enterprising manufacturers immediately filled these vacant houses. The process has repeated itself every time the GVN attempts to consolidate, relocate and manage these polluting small-scale producers, which creates a bigger problem as more villagers get involved in producing the craft.

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